

## **TROY GIS DATA MANAGEMENT**

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### **Parcel Data Assembly Process**

No digital parcel data for western Lincoln County, Montana was available when the Troy project started in late 2005. As a result, copies of paper parcel maps (property ownership) from Lincoln county offices in Libby were obtained in Fall, 2005. In Winter 2006, the paper parcel maps were scanned and the parcel boundaries digitized in ArcGIS 9X. The digitized parcels were then combined with the Montana Department of Revenue CAMA (Computer Assisted Mass Appraisal) database for Lincoln County.

The resulting geodatabase had 1,176 mapped parcels within the Troy study area (operable unit), of which 1,092 were successfully matched with ownership records in the state's CAMA database. 84 parcels had no match with CAMA records. Unique two letter-six digit AD numbers (address numbers) were assigned to each parcel to track the parcel. This geodatabase was used for the mailing list for property access agreements in April, 2007.

The state of Montana Department of Revenue released a major revision of the CAMA database for Lincoln County in May 2007. This revision, along with updates from actual landowners in the Troy that are posted to the Troy Call Log in WebEOC, was used to update the current parcel list.

The current parcel list (11/27/07 edition) has 1,201 parcels within the Troy study area, all of which have corresponding ownership records in the state's CAMA database.

### **Quality Control Steps**

1- Parcel owners with changes to their property records (usually their tax record) call or visit the Troy office, and their changes noted in the Troy Call Log in WebEOC by the Community Involvement Coordinator. This is checked by the GIS Data Manager **once a week** and the changes entered to the master parcel layer in ArcGIS. The type of change is noted in the NOTES field in the master parcel GIS layer.

2-The state's CAMA database on the web is checked **once a month** by the GIS Data Manager for major revisions for Lincoln County and the changes entered to the master parcel layer in ArcGIS.

3-A new, updated master parcel layer is uploaded on the Troy web portal by the GIS Data Manager **once every two weeks** during the field season and downloaded to the PDAs by the Sample Database Coordinator.

### **Additional Notes: Updates**

There have been three major updates to the western Lincoln County Cadastral Database in May, September and November of 2007. The updates have been posted on the Montana Cadastral/CAMA Project Data Access Page, <http://www.nris.mt.gov/nsdi/cadastral/>, which is hosted by the Montana Department of Administration and the Montana Natural Resources Information System.

Both the geographical data (the parcel boundaries) and the tabular data (the ownership information) are compared to the existing parcel geodatabase and the appropriate updates are made.

Geographically, parcel boundaries from the Troy parcel geodatabase are visually compared on a section by section basis with parcel boundaries in the Lincoln County Cadastral Database. New subdivisions are noted (parcel splits), as well as combined parcels (parcel merges) under a single owner.

In order to completely update the tabular database, the owner records in the Troy geodatabase are joined (using the unique GEOCODE number) to the owner records in the updated CAMA data table. Owners for each parcel can be checked side by side in the resulting table and the appropriate updates entered.

### **Additional Notes: Scale and Geographic Accuracy**

The Lincoln County Cadastral Database is constructed from paper maps at a scale of 1:100,000. This moderate to coarse scale makes the parcel boundaries hard to accurately portray on high resolution aerial photography.

The Troy Parcel Geodatabase was constructed from paper maps and registered to a scale of 1:24,000. This higher scale of parcel mapping improves the parcel boundaries when they are portrayed on high resolution aerial photography.

In the summer of 2007, the Montana Department of Environmental Quality commissioned high resolution 0.5 meter pixel aerial photography for the Troy study area plus the Bull River Valley and Lake Creek in southwestern Lincoln County. This high-resolution photography allows us to adjust parcel boundaries in many instances, such as making sure parcels within a downtown block area fit between the existing streets. These spatially adjusted parcel boundaries will be used during the 2008 field season for inspections.